AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A tunable resonating arrangement comprising:

a resonator apparatus~~ which provides a two pole filter~~,

input/output coupling means for coupling electromagnetic energy into/out of the resonator apparatus,

a tuning device for application of a biasing voltage/electric field to the resonator apparatus,

wherein the resonator apparatus comprises:

a first resonator,

a second resonator,

wherein said first resonator is non-tunable,

wherein said second resonator is tunable and comprises a ferroelectric substrate,

<u>wherein the first resonator and the second resonator work as a single resonator,</u>

a ground plane for separating said first and second resonators~~.~~, the ground plane being common for said first and second resonators,

coupling means for coupling said first and second resonators,

wherein for tuning of the resonator apparatus, the biasing voltage/electric field is applied to the second resonator.

2. (Previously Presented) A tunable resonating arrangement according to claim 1, wherein the first resonator is a disk resonator or a parallel plate resonator.

3. (Previously Presented) A tunable resonating arrangement according to claim 1, wherein the second resonator is a disk resonator or a parallel plate resonator.

4. (Previously Presented) A tunable resonating arrangement according to claim 2, wherein the first resonator comprises a dielectric substrate, the electric permittivity of which substantially does not vary with applied biasing voltage, which is disposed between a first resonator first electrode and a first resonator second electrode, and in that the first resonator second electrode forms the ground plane.

5. (Previously Presented) A tunable resonating arrangement according to claim 4, wherein the dielectric substrate of the first resonator comprises $LaAlO_3$, MgO, $NdGaO_3$, Al_2O_3, or sapphire.

6. (Previously Presented) A tunable resonating arrangement according to claim 4, wherein the first resonator has a high quality factor (Q), and preferably exceeding approximately 10^5 to $5 \cdot 10^5$.

7. (Previously Presented) A tunable resonating arrangement according to claim 4, wherein the second resonator comprises a tunable ferroelectric substrate, a second resonator first electrode, and a second resonator second electrode, and in that the second resonator second electrode forms the common ground plane, and thus the second resonator second electrode is the the first resonator second electrode.

8. (Previously Presented) A tunable resonating arrangement according to claim 7, wherein the ferroelectric substrate of the second resonator comprises $SrTiO_3$, $KTaO_3$, or $BaSTO_3$.

9. (Previously Presented) A tunable resonating arrangement according to claim 4, wherein the electrodes comprise a non-superconducting metal.

10. (Previously Presented) A tunable resonating arrangement according to claim 4,

wherein the electrodes comprise a superconducting material.

11. (Previously Presented) A tunable resonating arrangement according to claim 4,

wherein the electrodes comprise a high temperature superconducting material (HTS).

12. (Previously Presented) A tunable resonating arrangement according to claim 1,

wherein upon application of a biasing voltage to said second resonator, electromagnetic energy (EM) is redistributed between the second and first resonators via the coupling means.

13. (Previously Presented) A tunable resonating arrangement according to claim 12,

wherein the redistribution of electromagnetic energy is a function of the biasing voltage.

14. (Original) A tunable resonating arrangement according to claim 13,

wherein the transfer of electromagnetic energy from the second resonator to the first resonator increases with an increasing biasing voltage.

15. (Previously Presented) A tunable resonating arrangement according to claim 10,

wherein the resonating frequency and the loss tangent of the second resonator increase with application of an increasing biasing voltage, and wherein the transfer of electromagnetic energy from the second to the first resonator is increased, automatically compensating for the increased loss tangent of the second resonator by reducing influence thereof on the coupled resonator apparatus.

16. (Original) A tunable resonating arrangement according to claim 1, wherein the first and second resonators comprise thin film substrates.

17. (Previously Presented) A tunable resonating arrangement according to claim 1, further comprising at least two resonator apparatuses, and in that the common ground plane is common for the at least two resonator apparatuses which form a tunable filter.

18. (Previously Presented) A tunable resonating arrangement according to claim 1, wherein the coupling means comprises, for each resonator apparatus, a slot or an aperture in the common ground plane.

19. (Previously Presented) A tunable resonating arrangement according to claim 1, wherein each resonator is circular, square shaped, rectangular or ellipsoidal.

20. (Previously Presented) A tunable resonating arrangement according to claim 19,

wherein the arrangement comprises a dual mode resonator apparatus, and wherein each resonator comprises a protrusion, a cut-out, or a pertubation to provide for dual mode operation.

21. (Currently Amended) A tunable resonator apparatus[[,]] comprising:

a first resonator;

a second resonator;

said first resonator being non-tunable; said second resonator being a tunable ferroelectric resonator~~, the first resonator and the second resonator forming a two pole filter~~;

wherein the first resonator and the second resonator work as a single resonator;

a ground plane for separating said first and second resonators, the ground plane being common for said first and second resonators;

coupling means for providing coupling between said first resonantor and said second resonator; and

wherein for tuning of the resonator apparatus, a biasing voltage is applied to the second resonator.

22. (Previously Presented) A tunable resonator apparatus according to claim 21,

wherein the first resonator and the second resonator comprise parallel plate resonators, that the common ground plane is formed by a second electrode plate of the first resonator and of a second electrode of the second resonator, and wherein the coupling means comprises a slot or an aperture in the common ground plane.

23.(Previously Presented) A tunable resonator apparatus according to claim 22,

wherein the first resonator comprises a substratecomprised of $LaAlO_3$, MgO, $NdGaO_3$, Al_2O_3, or sapphire,

wherein the second resonator comprises a substratecomprised of $SrTiO_3$, or $KTaO_3$,

wherein the electrode plates comprise normal metal, or high temperature superconductors.

24. (Previously Presented) A method of tuning a resonator apparatus, comprising:

providing a first, non-tunable, resonator,

providing a second tunable resonator,

separating the first and second resonators by a common ground plane,

providing coupling means in said common ground plane such that the first and second resonators become coupled, allowing transfer of electromagnetic energy between the first and second resonators,

applying a biasing/tuning voltage to said second resonator for changing the resonating frequency, the loss tangent of the second resonator, and the transfer of electromagnetic energy to the first resonator,

optimizing application of the biasing voltage such that influence of the increased loss tangent in the first resonator, on the coupled resonator apparatus, will be compensated for, by an increased transfer of electromagnetic energy to the first resonator.

25.(original) The method of claim 24,

wherein the first resonator and the second resonator comprise disk or parallel plate resonators, wherein the common ground plane is formed by a second electrode plate of the first resonator and of a second electrode of the second resonator, and wherein the coupling means comprises a slot or an aperture in the common ground plane.

26. (Previously Presented) The method of claim 24,

wherein the first resonator comprises a substratecomprised of $LaAlO_3$, MgO, $NdGaO_3$, Al_2O_3, or sapphire,

wherein the second resonator comprises a substratecomprised of $SrTiO_3$, or $KTaO_3$,

wherein the electrode plates comprise normal metal, or high temperature superconductors.

27. (Previously Presented) The method of claim 26,

further comprising:

coupling two or more resonator apparatuses such that a filter is provided,

optimizing the coupling between the respective first and second resonator such that the increasing loss factor produced by an increased biasing voltageis reduced.

28. (New) A tunable resonating arrangement according to claim 1, wherein the resonator apparatus provides a two pole filter.

29. (New) A tunable resonating arrangement according to claim 1, wherein one of the first resonator and the second resonator contribute as a reactance.

30. (New) A tunable resonating arrangement according to claim 21, wherein the resonator apparatus provides a two pole filter.

31. (New) A tunable resonating arrangement according to claim 21, wherein one of the first resonator and the second resonator contribute as a reactance.